AMENDMENTS

Please make the following amendments to the claims:

41. *(Amended)* A method of increasing the proliferative capacity of a mammalian cell, comprising introducing into the cell a recombinant polynucleotide that encodes a telomerase reverse transcriptase protein, variant, or fragment having telomerase catalytic activity when complexed with a telomerase RNA,

wherein the polynucleotide hybridizes to DNA having a sequence complementary to SEQ. ID NO:1 at 5°C to 25°C below T_m in aqueous solution at 1 M NaCl;

wherein T_m is the melting temperature of double-stranded DNA having the sequence of SEQ. ID NO:1 under the same reaction conditions; and

whereby introducing the recombinant polynucleotide into the cell increases the proliferative capacity of the cell.

42. The method of claim 41, wherein the cell is a human cell.

43. *(Amended)* The method of claim 41, further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

44. *(Amended)* The method of claim 43, wherein the cell is a human cell.

45. The method of claim 41, wherein the polynucleotide encodes a full-length, naturally occurring telomerase reverse transcriptase.

46. The method of claim 45, wherein the cell is a human cell.

47. *(Amended)* The method of claim 45, further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

48. The method of claim 41, wherein the polynucleotide encodes a telomerase reverse transcriptase having the amino acid sequence of SEQ ID NO:2.

49. The method of claim 48 wherein the cell is a human cell.

50. *(Amended)* The method of claim 48 further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

51. *(Amended)* The method of claim 50 wherein the cell is a human cell.

52. The method of claim 41, wherein the recombinant polynucleotide is an expression vector.

53. *(Amended)* The method of claim 52 wherein the expression vector is an SV40 virus expression vector, an EBV expression vector, a herpesvirus expression vector, or a vaccinia virus expression vector.

54. The method of claim 52 wherein the expression vector is a retrovirus expression vector.

55. The method of claim 52 wherein the expression vector is an adenovirus expression vector.

56. *(Amended)* The method of claim 52 further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

57. *(Amended)* The method of claim 52 wherein the cell is a human cell.

REMARKS

This paper is responsive to the non-final Office Action dated August 26, 2002, which is the second action on the merits of the application.

Claims 41-57 are pending in the application and under examination. Reconsideration and allowance of the application is respectfully requested.

Drawings:

Applicants are grateful to the Examiner for including a copy of the Draftsperson's Drawing Review with the Office Action. Formal drawings are being forwarded under separate cover.